

SEQUENCE LISTING

<110> Wang, Yi
 Mueller, John P.
 Matis, Louis A.
 <120> Chimeric Protiens and uses thereof for the Diagnosis,
 Prevention, and Treatment of Diabetes
 <130> ALX-156 PCT
 <140> Not Yet Assigned
 <141> 1998-12-18
 <150> 60/068,648
 <151> 1997-12-22
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 <170> PatentIn Ver. 2.0
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 35 40 45
 Lys Met Phe Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg
 50 55 60
 Leu Ile Ala Phe Thr Ser Glu Lys Cys Leu Glu Leu Ala Glu Tyr Leu
 65 70 75 80
 Tyr Asn Ile Ile Lys Asn Arg Glu Gly Tyr Glu Met Val Phe Asp Gly
 85 90 95
 Lys Pro Gln His Thr Asn Val Cys Phe Trp Tyr Ile Pro Pro Ser Leu
 100 105 110
 Arg Thr Leu Glu Asp Asn Glu Glu Arg Met Ser Arg Leu Ser Lys Val
 115 120 125
 Ala Pro Val Ile Lys Ala Arg Met Met Glu Tyr Gly Thr Thr Met Val
 130 135 140
 Ser Tyr Gln Pro Leu Gly Asp Lys Val Asn His His His His His His
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 <223> Description of Artificial Sequence:IG2 Fusion
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 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr Arg
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 Arg Glu Ala Glu Asp Leu Met Asn Ile Leu Leu Gln Tyr Val Val Lys
 35 40 45
 Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe Lys Met Phe
 50 55 60

Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg Leu Ile Ala
 65 70 75 80
 Phe Thr Ser Glu His Ser His Phe Ser Leu Lys Lys Cys Leu Glu Leu
 85 90 95
 Ala Glu Tyr Leu Tyr Asn Ile Ile Lys Asn Arg Glu Gly Tyr Glu Met
 100 105 110
 Val Phe Asp Gly Lys Pro Gln His Thr Asn Val Cys Phe Trp Tyr Ile
 115 120 125
 Pro Pro Ser Leu Arg Thr Leu Glu Asp Asn Glu Glu Arg Met Ser Arg
 130 135 140
 Leu Ser Lys Val Ala Pro Val Ile Lys Ala Arg Met Met Glu Tyr Gly
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<211> 144

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<223> Description of Artificial Sequence:IG3 Fusion Protein

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 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr Arg
 20 25 30
 Arg Glu Ala Glu Asp Leu Met Asn Ile Leu Leu Gln Tyr Val Val Lys
 35 40 45
 Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe Lys Met Phe
 50 55 60
 Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg Leu Ile Ala
 65 70 75 80
 Phe Thr Ser Glu His Ser His Phe Ser Leu Lys Lys Cys Leu Glu Leu
 85 90 95
 Ala Glu Tyr Leu Tyr Asn Ile Ile Lys Asn Arg Glu Gly Tyr Glu Met
 100 105 110
 Val Phe Asp Gly Lys Pro Gln His Thr Asn Val Cys Phe Trp Tyr Ile
 115 120 125
 Pro Pro Ser Leu Arg Thr Leu Glu Asp Asn His His His His His His
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<210> 4

<211> 181

<212> PRT

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<223> Description of Artificial Sequence:IG4 Fusion Protein

<400> 4

Met Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu
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 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr Arg
 20 25 30
 Arg Glu Ala Glu Asp Leu Gln Val Gly Gln Val Glu Leu Gly Gly Gly
 35 40 45
 Pro Gly Ala Gly Ser Leu Gln Pro Leu Ala Leu Glu Gly Ser Leu Gln

SubA1

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50 55 60
 Lys Arg Gly Thr Asn Met Phe Thr Tyr Glu Ile Ala Pro Val Phe Val
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 85 90 95
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 100 105 110
 Val Val Lys Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe
 115 120 125
 Lys Met Phe Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg
 130 135 140
 Leu Gly Gly Gly Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
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<211> 232

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<223> Description of Artificial Sequence:IG5 Fusion Protein

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 20 25 30
 Arg Glu Ala Glu Asp Leu Gln Val Gly Gln Val Glu Leu Gly Gly Gly
 35 40 45
 Pro Gly Ala Gly Ser Leu Gln Pro Leu Ala Leu Glu Gly Ser Leu Gln
 50 55 60
 Lys Arg Gly Thr Asn Met Phe Thr Tyr Glu Ile Ala Pro Val Phe Val
 65 70 75 80
 Leu Leu Glu Tyr Val Thr Leu Lys Lys Met Arg Glu Ile Ile Gly Trp
 85 90 95
 Pro Gly Gly Ser Gly Asp Gly Gly Gly Met Asn Ile Leu Leu Gln Tyr
 100 105 110
 Val Val Lys Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe
 115 120 125
 Lys Met Phe Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg
 130 135 140
 Leu Gly Gly Gly Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
 145 150 155 160
 Lys Lys Gly Ala Ala Ala Leu Gly Ile Gly Thr Asp Ser Val Ile Gly
 165 170 175
 Gly Gly Tyr Ile Pro Pro Ser Leu Arg Thr Leu Glu Asp Asn Glu Glu
 180 185 190
 Arg Met Ser Arg Leu Ser Lys Val Ala Pro Val Ile Lys Ala Arg Met
 195 200 205
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<211> 393

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<223> Description of Artificial Sequence:IG6 Fusion Protein

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20 25 30
Arg Glu Ala Glu Asp Leu Gln Val Gly Gln Val Glu Leu Gly Gly Gly
35 40 45
Pro Gly Ala Gly Ser Leu Gln Pro Leu Ala Leu Glu Gly Ser Leu Gln
50 55 60
Lys Arg Gly Thr Asn Met Phe Thr Tyr Glu Ile Ala Pro Val Phe Val
65 70 75 80
Leu Leu Glu Tyr Val Thr Leu Lys Lys Met Arg Glu Ile Ile Gly Trp
85 90 95
Pro Gly Gly Ser Gly Asp Gly Gly Gly Met Asn Ile Leu Leu Gln Tyr
100 105 110
Val Val Lys Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe
115 120 125
Lys Met Phe Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg
130 135 140
Leu Gly Gly Gly Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
145 150 155 160
Lys Lys Gly Ala Ala Leu Gly Ile Gly Thr Asp Ser Val Ile Gly
165 170 175
Gly Gly Ile Glu His Asp Pro Arg Met Pro Ala Tyr Ile Ala Thr Gln
180 185 190
Gly Pro Leu Ser His Thr Ile Ala Asp Phe Trp Gln Met Val Trp Glu
195 200 205
Ser Gly Cys Thr Val Ile Val Met Leu Thr Pro Leu Val Glu Asp Gly
210 215 220
Val Lys Gln Cys Asp Arg Tyr Trp Pro Asp Glu Gly Ala Ser Leu Tyr
225 230 235 240
His Val Tyr Glu Val Asn Leu Val Ser Glu His Ile Trp Cys Glu Asp
245 250 255
Phe Leu Val Arg Ser Phe Tyr Leu Lys Asn Val Gln Thr Gln Glu Thr
260 265 270
Arg Thr Leu Thr Gln Phe His Phe Leu Ser Trp Pro Ala Glu Gly Thr
275 280 285
Pro Ala Ser Thr Arg Pro Leu Leu Asp Phe Arg Arg Lys Val Asn Lys
290 295 300
Cys Tyr Arg Gly Arg Ser Cys Pro Ile Ile Val His Cys Ser Asp Gly
305 310 315 320
Ala Gly Arg Thr Gly Thr Tyr Ile Leu Ile Asp Met Val Leu Asn Arg
325 330 335
Met Ala Lys Gly Val Lys Glu Ile Asp Ile Ala Ala Thr Leu Glu His
340 345 350
Val Arg Asp Gln Arg Pro Gly Leu Val Arg Ser Lys Asp Gln Phe Glu
355 360 365
Phe Ala Leu Thr Ala Val Ala Glu Glu Val Asn Ala Ile Leu Lys Ala
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Leu Pro Gln His His His His His His
385 390

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<211> 444

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:IG7 Fusion Protein

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 20 25 30
 Arg Glu Ala Glu Asp Leu Gln Val Gly Gln Val Glu Leu Gly Gly Gly
 35 40 45
 Pro Gly Ala Gly Ser Leu Gln Pro Leu Ala Leu Glu Gly Ser Leu Gln
 50 55 60
 Lys Arg Gly Thr Asn Met Phe Thr Tyr Glu Ile Ala Pro Val Phe Val
 65 70 75 80
 Leu Leu Glu Tyr Val Thr Leu Lys Lys Met Arg Glu Ile Ile Gly Trp
 85 90 95
 Pro Gly Gly Ser Gly Asp Gly Gly Gly Met Asn Ile Leu Leu Gln Tyr
 100 105 110
 Val Val Lys Ser Phe Asp Asn Met Tyr Ala Met Met Ile Ala Arg Phe
 115 120 125
 Lys Met Phe Pro Glu Val Lys Glu Lys Gly Met Ala Ala Leu Pro Arg
 130 135 140
 Leu Gly Gly Gly Ile Ala Phe Thr Ser Glu His Ser His Phe Ser Leu
 145 150 155 160
 Lys Lys Gly Ala Ala Ala Leu Gly Ile Gly Thr Asp Ser Val Ile Gly
 165 170 175
 Gly Gly Tyr Ile Pro Pro Ser Leu Arg Thr Leu Glu Asp Asn Glu Glu
 180 185 190
 Arg Met Ser Arg Leu Ser Lys Val Ala Pro Val Ile Lys Ala Arg Met
 195 200 205
 Met Glu Tyr Gly Thr Thr Met Val Ser Tyr Gln Pro Leu Gly Asp Lys
 210 215 220
 Val Asn Gly Gly Gly Ile Glu His Asp Pro Arg Met Pro Ala Tyr Ile
 225 230 235 240
 Ala Thr Gln Gly Pro Leu Ser His Thr Ile Ala Asp Phe Trp Gln Met
 245 250 255
 Val Trp Glu Ser Gly Cys Thr Val Ile Val Met Leu Thr Pro Leu Val
 260 265 270
 Glu Asp Gly Val Lys Gln Cys Asp Arg Tyr Trp Pro Asp Glu Gly Ala
 275 280 285
 Ser Leu Tyr His Val Tyr Glu Val Asn Leu Val Ser Glu His Ile Trp
 290 295 300
 Cys Glu Asp Phe Leu Val Arg Ser Phe Tyr Leu Lys Asn Val Gln Thr
 305 310 315 320
 Gln Glu Thr Arg Thr Leu Thr Gln Phe His Phe Leu Ser Trp Pro Ala
 325 330 335
 Glu Gly Thr Pro Ala Ser Thr Arg Pro Leu Leu Asp Phe Arg Arg Lys
 340 345 350
 Val Asn Lys Cys Tyr Arg Gly Arg Ser Cys Pro Ile Ile Val His Cys
 355 360 365
 Ser Asp Gly Ala Gly Arg Thr Gly Thr Tyr Ile Leu Ile Asp Met Val
 370 375 380
 Leu Asn Arg Met Ala Lys Gly Val Lys Glu Ile Asp Ile Ala Ala Thr
 385 390 395 400

Sub A1

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<223> Description of Artificial Sequence:prIG1 primer

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<210> 12

<211> 143

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG2 primer

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gcgcatcat catgcatatc atg 143

<210> 13

<211> 138

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG3 primer

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taccaacggt tgcttttggt acatcccgcc gagcctgcgt accctggaag ataacgaaga 120
acgcatgagc cgtctgtc 138

<210> 14

<211> 132

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG4 primer

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gctcatgcgt tc 132

<210> 15

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG5 primer

<400> 15

catatgttcg ttaaccag 18

<210> 16

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG6 primer

<400> 16

ggatccttaa tggatgatg 18

<210> 17

<211> 492

<212> DNA

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<223> Description of Artificial Sequence:IG1 Fusion
Protein coding sequence

<400> 17

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cataccaacg tttgcttttg gtacatcccg ccgagcctgc gtaccctgga agataacgaa 360
gaacgcatga gccgtctgtc taaagttgcc ccggttatta aagcgcgcat gatggaatat 420
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<210> 18

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<220>

<223> Description of Artificial Sequence:prIG7 primer

<400> 18

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agatctgatg aacattctgc tgcagtatgt tggtaaaagc ttcgataaca tgtatgccat 60
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<210> 19

<211> 78

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG8 primer

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<210> 20

<211> 27

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG12 primer

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<210> 21

<211> 552

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:IG2 Fusion
Protein coding sequence

<400> 21

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 Protein coding sequence
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 <223> Description of Artificial Sequence:prIG15 primer
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<223> Description of Artificial Sequence:prIG16 primer

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<210> 28

<211> 69

<212> DNA

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<223> Description of Artificial Sequence:prIG17 primer

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<210> 29

<211> 69

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG18 primer

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<210> 30

<211> 69

<212> DNA

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<223> Description of Artificial Sequence:prIG19 primer

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<210> 31

<211> 68

<212> DNA

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<223> Description of Artificial Sequence:prIG20 primer

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<210> 32

<211> 69

<212> DNA

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<223> Description of Artificial Sequence:prIG21 primer

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<210> 33

<211> 60

<212> DNA

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<223> Description of Artificial Sequence:prIG22 primer

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<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:prIG23 primer

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<210> 35

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:IG5 Fusion

Protein coding sequence

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<223> Description of Artificial Sequence:IG6 Fusion

Protein coding sequence

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sub A1

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 cttgtccgct ctaaggacca gtttgaattt gccctgacag ccgtggcgga ggaagtgaat 1140
 gccatcctca aggccctgcc ccagcaccat caccatcacc attaaggatc c 1191

<210> 37

<211> 1344

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:IG7 Fusion

Protein coding sequence

<400> 37

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 tgcgggtgaac gcggcttttt ctacaccccg aaaaccgctc gtgaagcgga agatctgcag 120
 gtggggcagg tggagctggg cgggggccct ggtgcaggca gcctgcagcc cttggccctg 180
 gaggggtccc tgcagaagcg tggcactaac atgttcacct atgaaattgc tccagtattt 240
 gtgcttttgg aatatgtcac actaaagaaa atgagagaaa tcattggctg gccagggggc 300
 tctggcgatg gaggcggtat gaacattctg ctgcagtatg ttgtttaaag cttcgataac 360
 atgtatgcc a tgatgatcgc gcgctttaa atgttcccg aagttaaaga aaaaggatg 420
 gccgcgctgc cgcgtctggg aggcggtatt gcctttacct ctgaacatag ccatttttct 480
 ctgaaaaaag gagctgcagc cttagggatt ggaacagaca gcgtgattgg aggcggttac 540
 attcctccaa gcttgcgtac tctggaagac aatgaagaac gcatgagccg tctgtctaaa 600
 gttgcccccg ttattaaagc gcgcatgatg gaatatggca ccaccatgg tagctaccag 660
 ccgctgggtg ataaagttaa cggaggcggt attgagcatg accctcgat gccagcctac 720
 atagccacgc agggcccgt gtcccatacc atcgcagact tctggcagat ggtgtgggag 780
 agcggctgca ccgtcatcgt catgctgacc ccgctggtgg aggatggtgt caagcagtgt 840
 gaccgctact ggccagatga gggcgctcc ctctaccacg tatatgaggt gaacctggtg 900
 tcggagcaca tctggtgcga ggactttctg gtgcggagct tctacctgaa gaactgtcag 960
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 cgctcctgcc ccatcatcgt gcactgcagt gatggtgcgg ggaggaccgg cacctacatc 1140
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 catcaccatc accattaagg atcc 1344

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